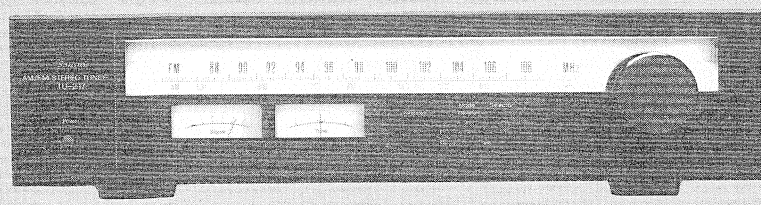
SERVICE MANUAL

AM/FM STEREO TUNER

SANSUI TU-217



SPECIFICATION

FM Section

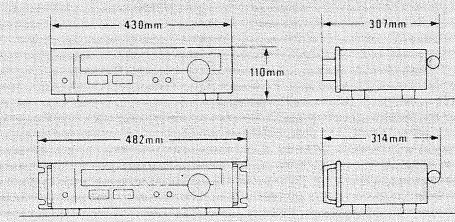
Tuning range	88 to 108MHz
Usable Sensitivity	
Mono IHF	10.6dBf (1.85μV: T100)
Stereo IHF	20.0dBf
50dB Quieting Sensitivity	
Mono	18dBf
Stereo	38dBf
Signal to noise ratio at 65dBf	
Mono	70dB
Stereo	68dB
Distortion (at 65dBf)	
Mono	less than 0.15% at 100Hz
	less than 0.13% at 1,000Hz
	less than 0.25% at 6,000Hz
Stereo	less than 0.18% at 100Hz
	less than 0.15% at 1,000Hz
	less than 0.35% at 6,000Hz
Alternate channel selectivity (at 400kHz)	50dB
Capture ratio	1.7dB
Image response ratio	48dB (at 98MHz)
Spurious response ratio	68dB (at 98MHz)
Stereo separation	35dB at 100Hz
	40dB at 1,000Hz
	30dB at 10,000Hz
Frequency response	30 to 15,000Hz +1dB −1dB
Antenna input impedance	300 ohms balanced
	75 ohms unbalanced

AM Section

Tuning range	530 to 1,600kHz
Usable sensitivity (Bar antenna)	50dB/m (300μV/m)
Selectivity (±10kHz)	35dB
Signal to noise ratio	46dB

Others

Output level	0.7V
Power requirements	100, 120, 220, 240V 50/60Hz
	120V (Usable 110-130V) 60Hz
	(For U.S.A. & Canada only)
Power consumption	4W
Weight	5.3kg (11.7 lbs) net
	6.4kg (14.1 lbs) packed

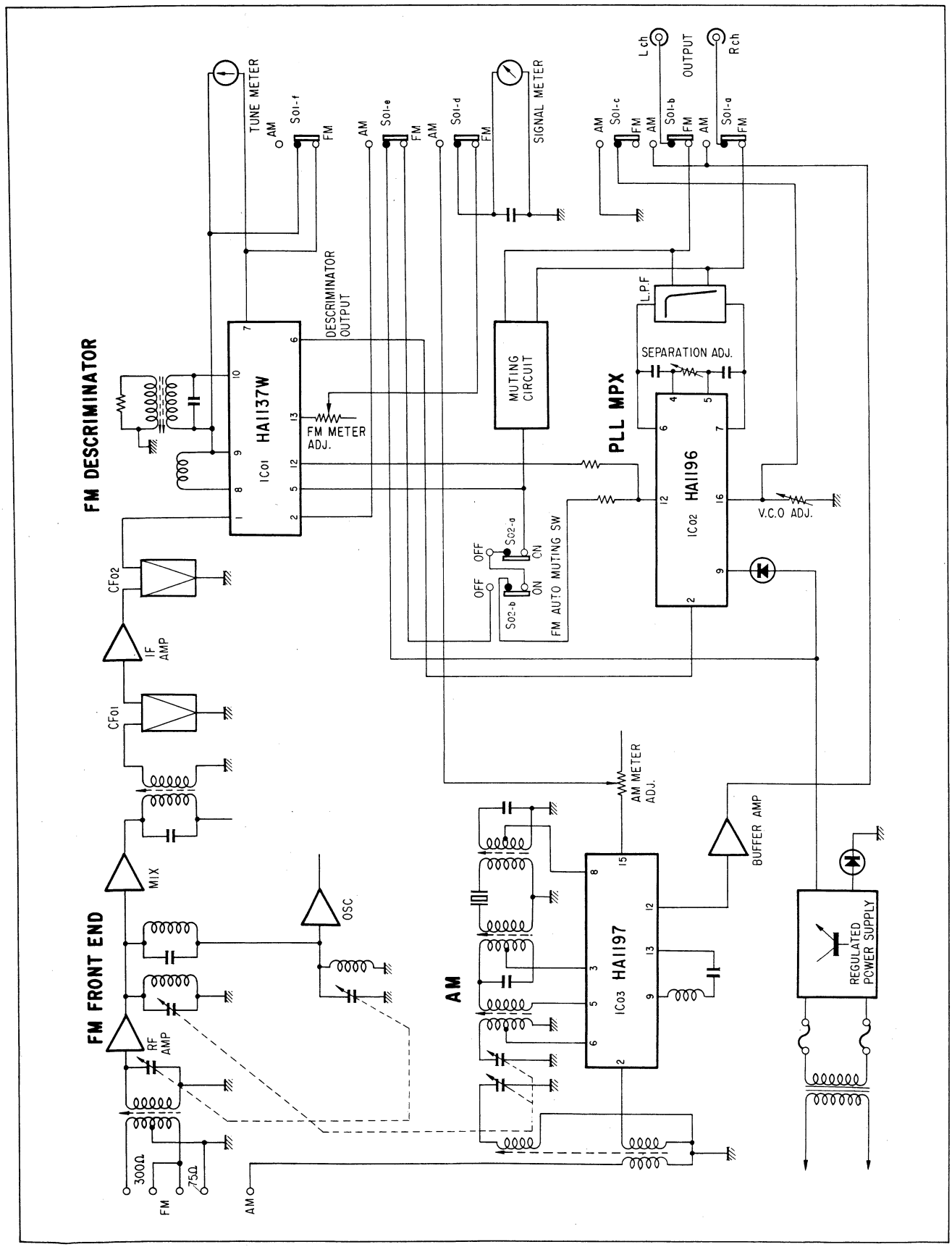


* Design and specifications subject to change without notice for improvements.

Sansui

SANSUI ELECTRIC CO., LTD.

1. BLOCK DIAGRAM



2. OPERATION OF QUADRATURE DETECTOR

A Fundamental circuit configuration of Quadrature detector is shown in Fig. 2-1, and this circuit consists of a phase shifter and a transistor circuit of duplex-balanced differential amplification.

This circuit is designed that the product of an input point (a) and a point (b) may appear at an output point (A).

As phase shifter is tuned with FM intermediate frequency of 10.7 MHz, when the input signal frequency is same as the center frequency of fo (10.7 MHz), the phase of the input signal is delayed by 90 deg. at output point (a) of phase shifter when the input signal frequency is lower than the fo, the phase delay becomes more than 90 deg. because the resonance circuit in the phase shifter becomes capacitive load, and when higher than fo, the phase delay becomes less than 90 deg. because the resonance circuit becomes inductive load.

The output of the limiter amplifier is applied to each base of the TR05 and TR06 and their phase are opposit. Also, when the input signal frequency is the same as the fo, the signal of 90 deg. -delayed phase is applied to the TR01 and TR04 from the phase shifter, as compared with the TR05, and also the signal of 90 deg. -delayed phase is applied to the TR02 and TR03, as compared with the TR06.

Fig. 2-1

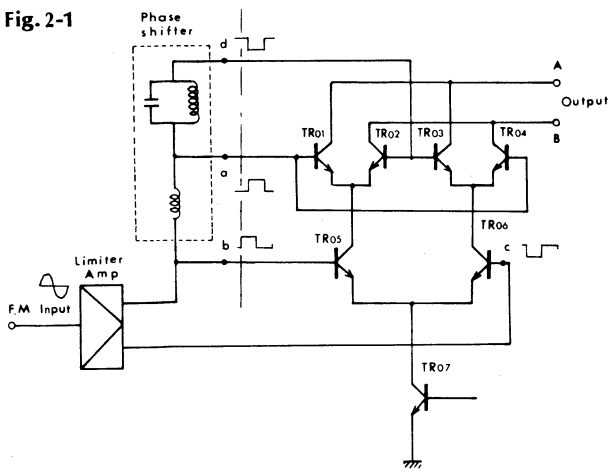
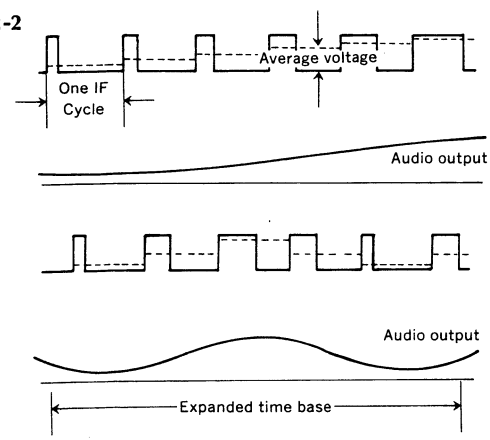


Fig. 2-2



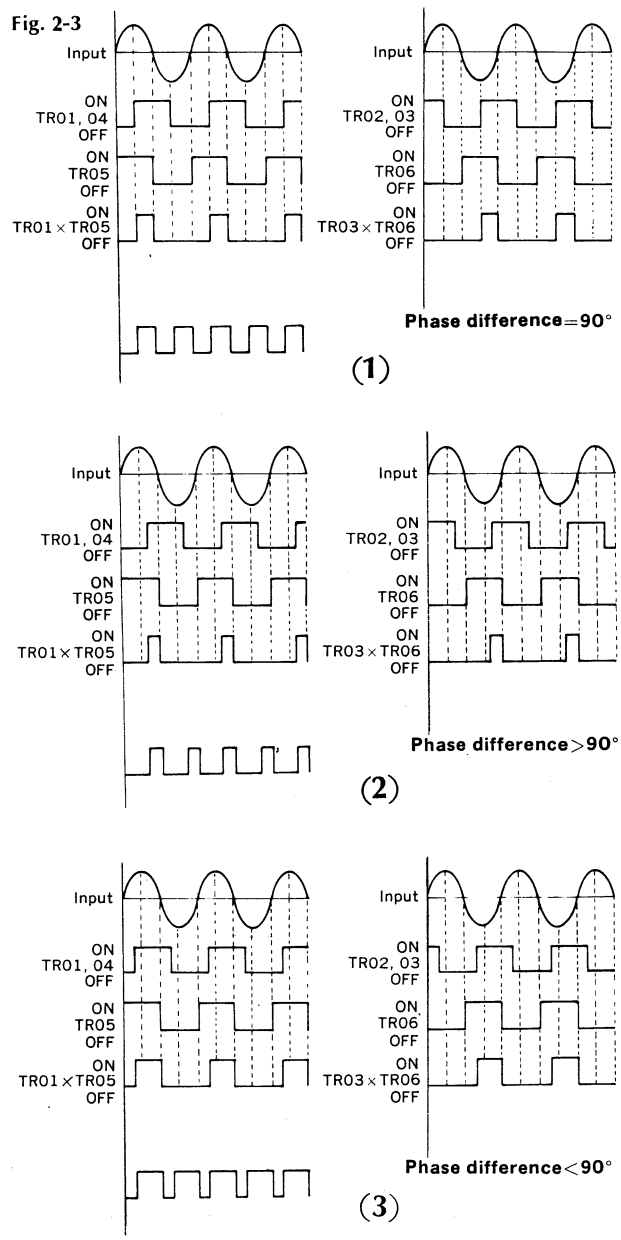
Furthermore, the waveforms shown at the points (a) (b) (c), and (d) in Fig. 2-1 represent the phase relation of the transistors connected to these points, however, these actual input waveforms are Sine-wave at these points.

The operation of each transistor are shown in Fig. 2-2, according to the condition that; the signal whose frequency is the same as the fo is applied to the FM input, the signal whose frequency is lower than the fo is applied, and the signal higher than fo is applied. And when the input signal frequency is the same as fo, the output is shown as (1), when lower than the fo, is shown as (2), and when higher than the fo, is shown as (3).

As the frequency of FM deviates higher-and -lower at its center frequency fo, the audio signals as shown in Fig. 2-3 can be obtained as output signal of an integrating circuit connected with the next stage of quadrature detector.

In this way, the quadrature detection is a detecting method by which the deviation of input frequency against the tuned frequency of the phase shifter is converted into the change of the mean output potential.

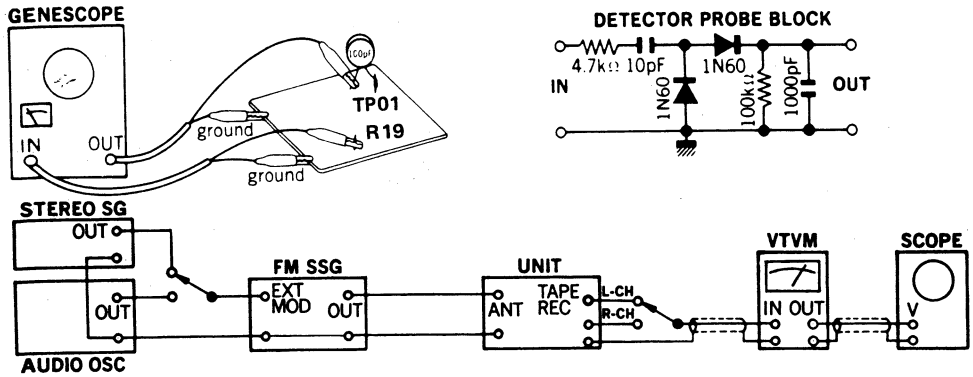
Fig. 2-3



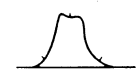
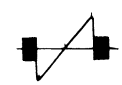
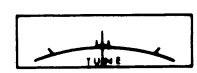
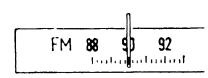
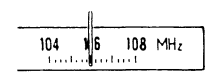
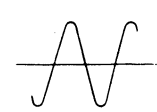
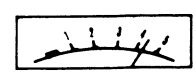
3. ADJUSTMENT

3-1. FM Adjustment

Note: 1. Selector . . . . . FM mono
2. Connection . . . Connect the output of genescope to TP through 100 pF ceramic capacitor.



1) FM IF, RF Adjustment and Dial Calibration

STEP	SUBJECT	FEED SIGNAL FROM	FEED SIGNAL TO	MEASURE OUTPUT	ADJUST	ADJUST FOR	REMARKS
1.	IF Coil	Output 90dB Genescope	TP01 F-2762	Lead wire of R19 (Use Detector Probe)	T01 F-2762	Max. IF waveform	
2.	Discriminator Coil	Same as above	Same as above	TP02, F-2762	T02 T03 F-2762	Steep linearity of S curve Make symmetrical S curve	
3.	Tune Meter	98MHz ANT Input 65dBf (59.8dB) 1000Hz (100% MOD) FM SSG	ANT terminal 300Ω	Tune Meter	T03 F-2762	Center on Meter	
4.	90MHz Dial Calibration	90MHz ANT Input 65dBf (59.8dB) 1000Hz (100% MOD) FM SSG	Same as above	OUT L or R-CH VTVM & Scope	L03 F-2762	Max. Indication on signal meter & VTVM & Scope Center Indication on Tune Meter	
	106MHz Dial Calibration	106MHz ANT Input 65dBf (59.8dB) 1000Hz (100% MOD) FM SSG	Same as above	Same as above	TC03 F-2762		
5.	90MHz RF Adj.	90MHz ANT Input Minimum Value with sine wave 1000Hz (100% MOD) FM SSG	Same as above	Same as above	L01, L02 F-2762	Same as above	
	106MHz RF Adj.	106MHz ANT Input Minimum Value with sine wave 1000Hz (100% MOD) FM SSG	Same as above	Same as above	TC01, TC02 F-2762	Same as above	
6.	Signal Meter Volume	98MHz ANT Input 65dBf (59.8dB) 1000Hz (100% MOD) FM SSG	Same as above	Signal Meter	VR01 F-2762	4.3 on Meter	

2) FM STEREO Adjustment

Note: 1. Selector ..... FM AUTO

STEP	SUBJECT	FEED SIGNAL FROM	FEED SIGNAL TO	MEASURE OUTPUT	ADJUST	ADJUST FOR	REMARKS
1.	PLL VCO Adj.	98MHz ANT Input 65dBf (59.8dB) FM SSG Pilot 19kHz (9% MOD) SUB 1kHz+Pilot (100% MOD) STEREO SG	ANT terminal 300Ω	Stereo indicator	VR03 F-2762	Light indicator	Adjust the VR03 within center of lighting level.
	PLL VCO Adj. In case of using Freq. counter.	**98MHz** **ANT Input 65dBf (59.8dB)** **FM SSG** **(no MOD)**	Same as above	TP03 F-2762 Use Freq. counter	VR03 F-2762	76kHz ±150Hz	
2.	Separation	98MHz ANT Input 65dBf (59.8dB) FM SSG Pilot 19kHz (9% MOD) R (or L) Mode 1kHz+ Pilot (100% MOD) STEREO SG	Same as above	OUT L (or R)-CH VTVM & Scope	VR02 F-2762	OUT −34dB	Confirm separation L-CH→R-CH
3.	Muting level & indicator level	98MHz ANT Input 18dBf (12.8dB) FM SSG Pilot 19kHz (9% MOD) SUB 1kHz+Pilot (100% MOD) STEREO SG	Same as above	Stereo indicator	VR03 F-2762	Muting level 18dBf (12.8dB) Indicator lighting level 18dBf (12.8dB)	FM MUTING Switch ON

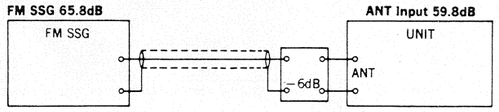
※ NEW MEASUREMENT FOR FM.

Input signal level under the provision of IHFM-T-200, a new measurement method is indicated by available power ratio "dBf" To obtain approximate available power ratio "dBf", abstract 0.8 from attenuater indication of general FMSG (open load indication type); however, the former measurement; IHFM-T-100 is designated together too.

The way of modulation on IHFM-T-200 is shown below.

	modulation frequency	modulation mode	modulation fuctor
FM MONO	1000Hz		100%
FM STEREO	1000Hz	SUB	Pilot 9% Pilot+SUB 100%

※The relation between the standard input 65dBf of IHFM-T-200 and the former indication "dB" is shown below.



Abbreviations

Epuipment

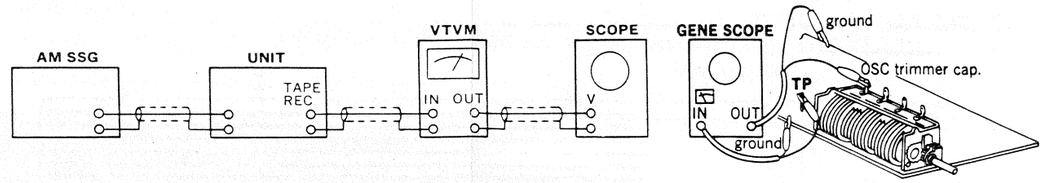
AM FM Generator Oscilloscope ..... Genescope
AM Standard Signal Generator ..... AM SSG
FM Standard Signal Generator ..... FM SSG
FM Stereo Generator ..... Stereo SG
Oscilloscope ..... Scope
Audio Oscillator ..... Audio Osc.

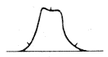
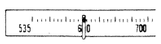
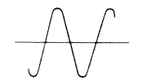
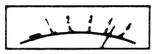
Others

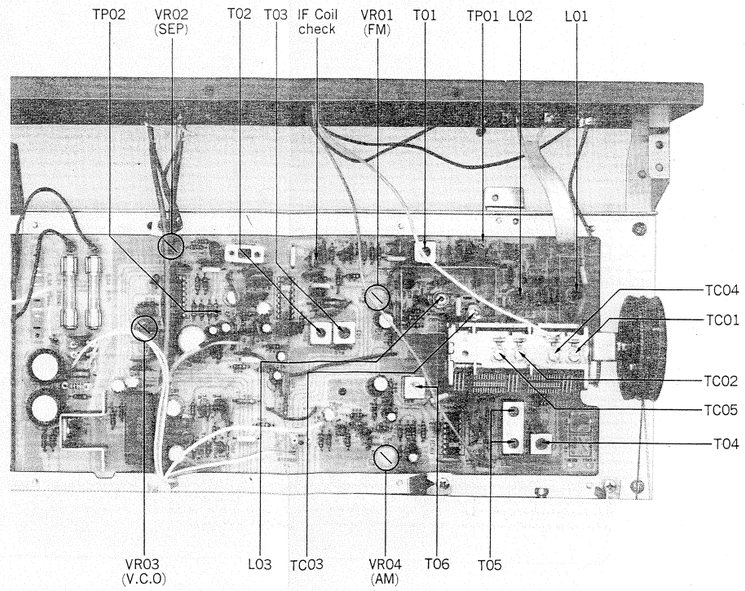
Antenna ..... ANT.
Modulation ..... MOD.

3-2. AM IF Adjustment & Dial Calibration

Note: 1. Selector ..... AM



STEP	SUBJECT	FEED SIGNAL FROM	FEED SIGNAL TO	MEASURE OUTPUT	ADJUST	ADJUST FOR	REMARKS
1.	IF Coil	Genescope Output 70dB	TC05 F-2762	TP07, R63 F-2678	T05 F-2762	Max. IF waveform	
2.	600kHz Dial Calibration	600kHz ANT Input 60dB 400Hz (MOD 30%) AM SSG	AM ANT terminal	OUT L or R-CH VTVM & Scope	T04 F-2762	Max. Indication on Signal Meter & V.T.V.M.	
	1400kHz Dial Calibration	1400kHz AN Input 60dB 400Hz (MOD 30%) AM SSG	Same as above	Same as above	TC05 F-2762		
3.	600kHz RF Adj.	600kHz ANT Input 50dB 400Hz (MOD 30%) AM SSG	Same as above	Same as above	Bar Antenna L701	Same as above	
	1400Hz RF Adj.	1400kHz ANT Input 50dB 400Hz (MOD 30%) AM SSG	Same as above	Same as above	TC04 F-2762	Same as above	
4.	Signal Meter volume	1000kHz ANT Input 80dB 400Hz (MOD 30%) AM SSG	Same as above	Signal Meter	VR05 F-2678	4.3 on meter	
5.	460kHz Trap	460kHz ANT Input 80dB 400Hz (MOD 30%) AM SSG	Same as above	OUT L or R-CH VTVM & Scope	L13 LC01 F-2678	Min. Output	

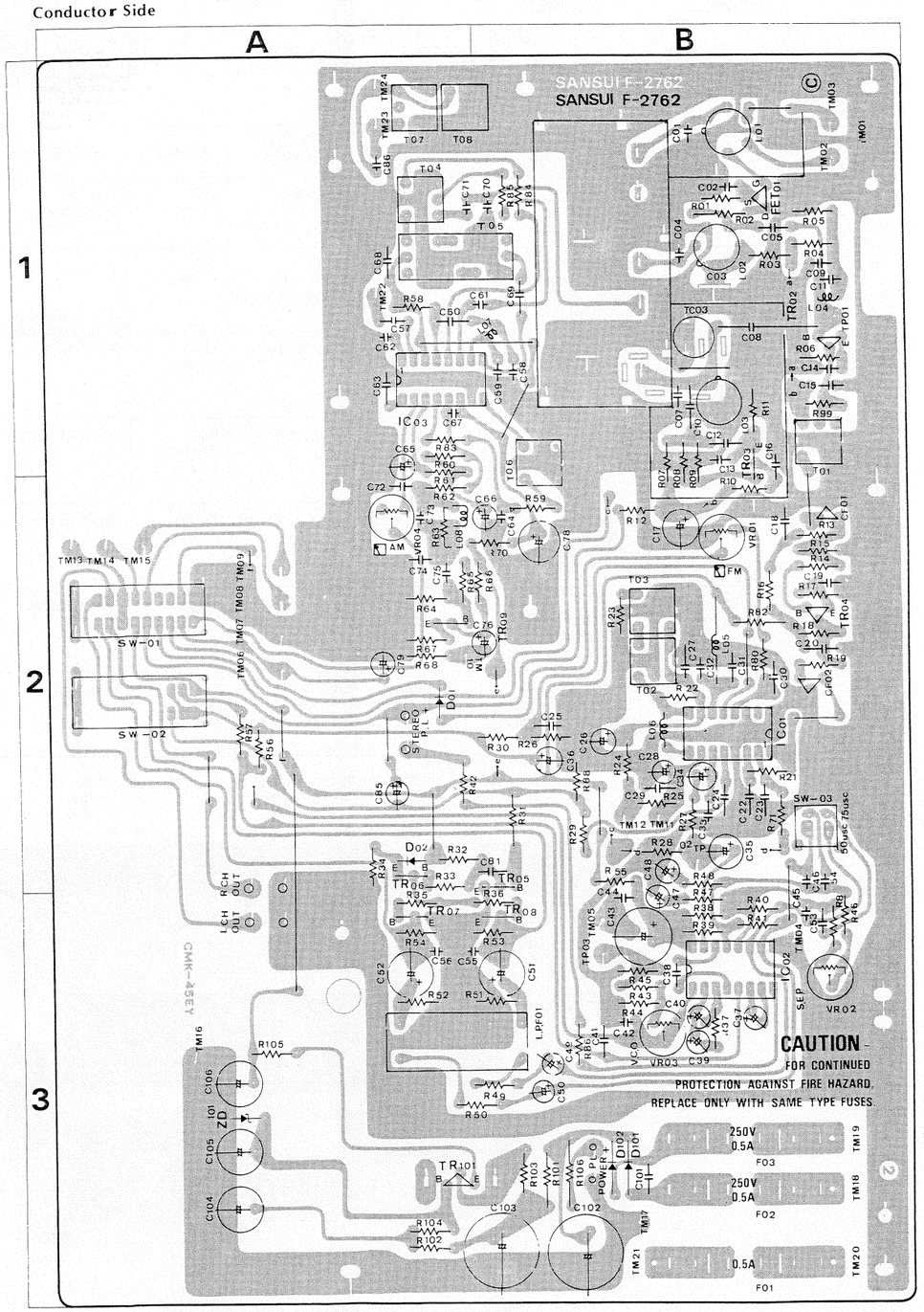


4. PARTS LOCATION & PARTS LIST

Since some of capacitors and resistors are omitted from parts lists in this Service Manual, refer to the common parts list for capacitors & resistors which was appended previously to each Sansui Manual.

1) F-2762 FM, AM, RF, IF Circuit Board (Stock No. 7521581)

Conductor Side



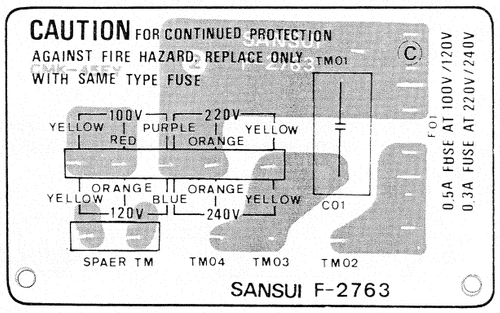
Parts List <F-2762>

Parts No.	Stock No.	Description	Position
TR02,03	0305801,2	2SC1047 B, C	1B.1A
TR04	0306341,2	2SC1674L, K	2B
TR05	0306070,1	2SC1313F, G	2B
TR06	0300470,1	2SA726 (W) F, G Transistor	2A
TR07,08	0306390,1	2SC1636 7, 8	3A
TR09	0306070,1	2SC1313F, G	2A
TR101	0308391,2	2SD313AL D, E	3A
IC 01	0360350	HA1137W	2B
IC 02	0360320	HA1196 IC	3B
IC 03	0360390	HA1197	1A
FT01	0370172	2SK49 H FET	
D 01	0340090	DS-430 Varistor	2A
D 02	0311160	1S2473D	2A
D 101	0310340	10D1 Diode	3B
D 102	0310340	10D1	3B
ZD101	0315790	EQA01-13R Zener Diode	3A
C 01	0669347	12pF 50V	1B
C 03	0659015	2200pF 50V	1B
C 04	0669350	15pF 50V C.E	1B
C 05	0669509	0.25pF 50V	1B
C 07	0669019	18pF 50V	1B
C 08	0679012	1.5pF 500V	1B
		Gimmic Capacitor	
C 10,12,13	0669345	10pF 50V C.E.	1A
C 37	0573228	0.22μF 35WV	3B
C 39	0573339	33μF 35WV T.C.	3B
C 40	0573159	1.5μF 35WV	3B
C 42	0629005	360pF 50V	3B
C 53,54	0620561	560pF 50V P.C.	3B
C 55,56	0620151	150pF 50V	3A
C 70	0669415	15pF 50V C, E	1B

Parts No.	Stock No.	Description	Position
R 101	0193100	10Ω ¼W F.R	3B
R 106	0103122	1.2kΩ ½W C.R.	3B
L 01	4200720	Antenna Coil	1B
L 02	4210340	RF Coil	1B
L 03	4220400	OSC Coil	1B
L 04	4900140	1μH Inductor	1B
L 05	4290011	Peaking Coil	2B
L 06	4290300	18μH Inductor	2B
L 07	4900110	100μH Inductor	1B
T 01	4235930	10.7MHz IF Coil	2B
T 02	4235990	10.7MHz FM IFT	2B
T 03	4236000	10.7MHz IF Coil	2B
T 04	4220590	150μH OSC Coil	1A
T 05	0910370	Ceramic Filter	1A
T 06	4230620	IF Coil	1A
CF01	0910380	Ceramic Filter	2B
CF02	0910380	Ceramic Filter	2B
LF01	0910220	Low Pass Filter	
VR01	1035170	Volume 47kΩ B	2B
VR02	1035210	Volume 220kΩ B	3B
VR03	1034250	Volume 4.7kΩ B	3B
VR04	1035110	Volume 4.7kΩ B	2A
S 01	1171170	Lever Switch, selector	2A
S 02	1171130	Lever Switch, muting	2A
S 03	1110270	Slide Switch, de emphases	2B
F 02,03	0432210	AC Fuse 0.5A 250V	3B
VC01	1220210	AM FM Variable Capacitor	
TC03	1230090	Trimmer Capacitor	1B
	2410910	2P, Pin Ass'y Type E	

2) F-2763 Voltage Selector Circuit Board (Stock No. 7595421)

Conductor Side

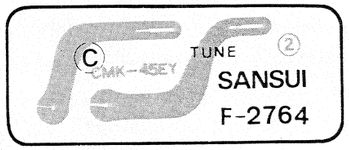


Parts List

Parts No.	Stock No.	Description
C 01	0635476	0.0047μF 125WV MC
	0659802	0.0047μF AC 150V CC
F 01	0432210	AC Fuse 0.5A 250V

3) F-2764 Tune Meter Circuit Board

Conductor Side (Stock No. 7595431)

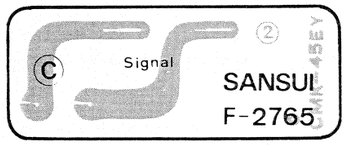


Parts List

Parts No.	Stock No.	Description
M 02	4301140	Tune Meter

4) F-2765 Signal Meter Circuit Board

Conductor Side (Stock No. 7595441)



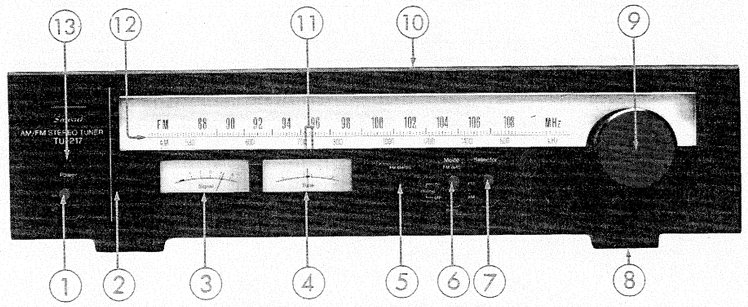
Parts List

Parts No.	Stock No.	Description
M 01	4301130	Signal Meter

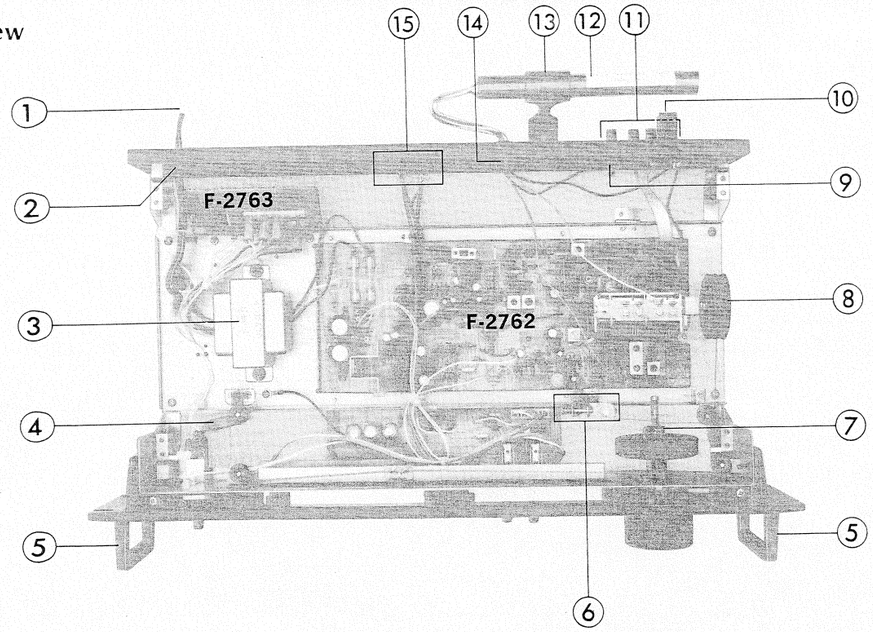
* La présentation et les spécifications sont susceptibles d'éter modifiées sans préavis par suites d'améliorations éventuelles.
* Änderungen, die dem technischen Fortschritt dienen, bleiben vorbehalten.
* Design and specifications subject to change without notice for improvements.

5. OTHER PARTS

Front View



Top View



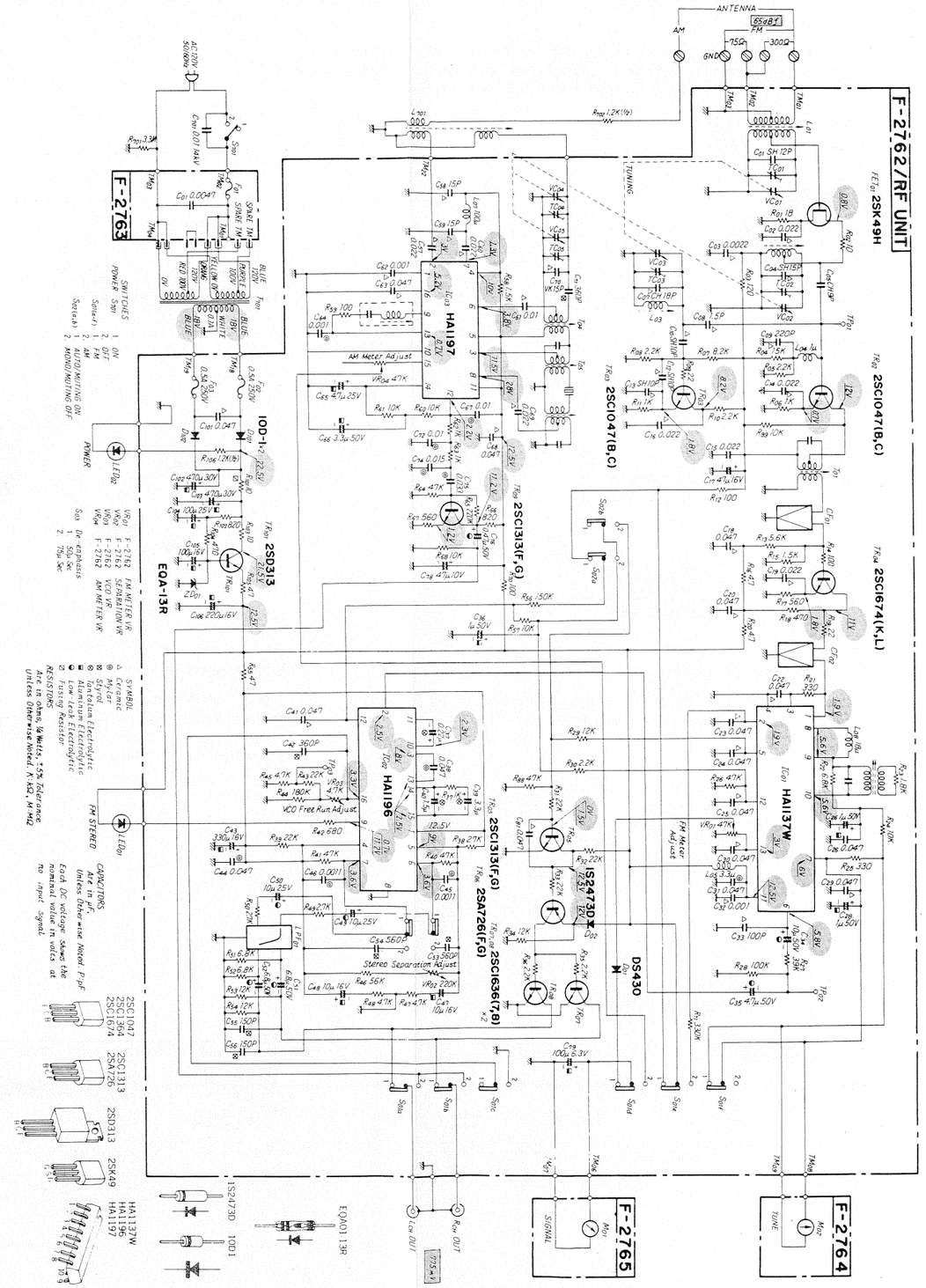
Parts List (Front View)

No.	Parts No.	Stock No.	Description
1	S 701	1171640	Lever Switch, power
		5326611	Knob, power switch
2		7007660	Front Panel Ass'y
		5305800	Front Panel
		5336680	SNASUI Badge
		5296160	Glass, dial scale
		0319120	LED, power, stereo indicator
3	M 01	4301130	Signal Meter
4	M 02	4301140	Tune Meter
5		0319120	LED, stereo indicator
6	S 02	1171130	Lever Switch, muting
		5326611	Knob, lever switch
7	S 01	1171170	Lever Switch, selector
		5326611	Knob, lever switch
8		5507070	Leg
9		5318960	Tuning Knob
10		5006730	Bonnet
11		5416470	Dial Pointer
12		5408220	Dial Scale
13		0319120	LED, power indicator

Parts List (Top View)

No.	Parts No.	Stock No.	Description
1		3800010, 4	Power Cord
2		3910510	Strain Relief
3	PT 01	4002670	Power Transformer
4	C 701	0659801	0.1μF 150V C.C.
		5616220	Capacitor Cover
5		5396350	Rack Mounting Adapter (each)
6		7136110	Tension Unit
7		7036550	Tuning Unit
8		6146670	Pulley
9	R 702	0103122	1.2kΩ ½W C.R.
10		5286480	Antenna Holder (B)
11		2210310	Antenna Terminal Board
12	L 701	4200860	Bar Antenna
13		5286450	Antenna Holder (A)
14		3910600	Bushing
15		2200300	Output Terminal Board

6. SCHEMATIC DIAGRAM



7. THREADING OF DIAL CORD

* If a dial cord is cut off or slips, replace it by following procedures.
As this unit uses 0.5 mm ϕ cord, please replace it with the same type certainly.
* The length of dial cord is approximately 170 cm (66.9 inch).

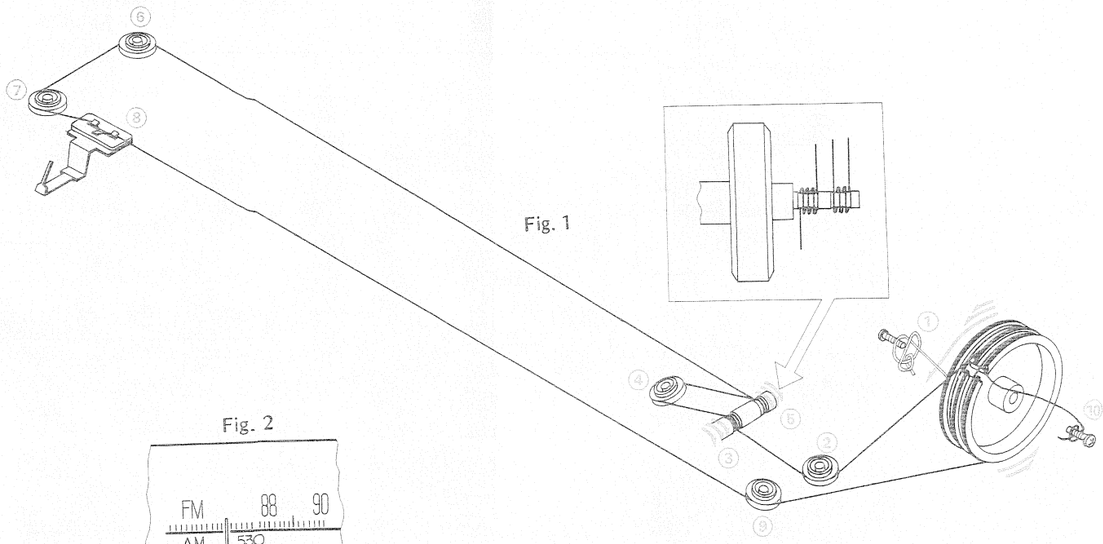
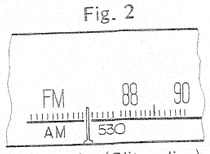


Fig. 1

Fig. 2



Start-point (Slit on line)

1) Threading of Dial Cord

Thread the dial cord in numerical order from ① to ⑩ as Fig. 1.
* Open the variable capacitor completely.

Stock No.	Description
6036050	Dial Cord (0.5mmϕ)
6146670	Dial Pulley

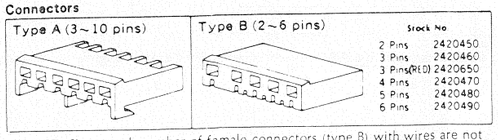
2) Attachment of Dial Pointer

1. Close the variable capacitor completely.
2. Set the dial pointer to the start-point (Slit on line) as Fig. 2.
* Confirm that the dial pointer runs smoothly on the dial scale by turning the tuning shaft.

● Figures

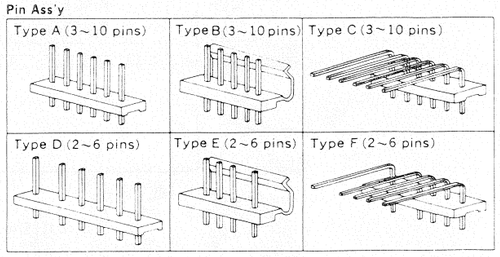
Connectors & Pin Ass'y

Connectors



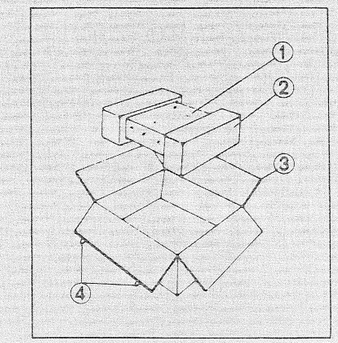
NOTE: Since stock number of famale connectors (type B) with wires are not shown in each parts list of Complete circuit board, please refer to the above parts list when ordering the connector.

Pin Ass'y



8. PACKING LIST

Parts No.	Stock No.	Description
1	9116640	Vinyl Cover
2	9028100	Stylofoam Packing
3	9009760	Carton Case
4	5996080	Curl Stopper



9. ACCESSORY PARTS LIST

Stock No.	Description
9203160	Operating Instructions
9237600	Schematic Diagram
3820100	FM Antenna
3810280	Pinplug Cord
5192082	Hexagon Wrench (1.5mm)
5396350	Rack Mounting Adapter (each)

MEMO

Sansui

SANSUI ELECTRONICS CORPORATION: 55-11 Queens Blvd. Woodside, N.Y. 11377 U.S.A.
333 West Alondra Blvd. Gardena, California 90247 U.S.A.
3036 Koapaka St. Honolulu, Hawaii 96819 U.S.A.
SANSUI AUDIO EUROPE N.V.: North Trade Bldg (9th floor) Noorderlaan 133-Bus 1,2030 Antwerp, Belgium
SANSUI AUDIO EUROPE S.A.: Arabella center, 6 Frankfurt AM Main, Lyoner Strasse 44-48, West Germany
SANSUI ELECTRIC COMPANY LTD.: 14-1, Izumi 2-chome, Suginamiku, Tokyo 168 Japan PHONE: (03) 323-1111/TELEX:232-2076

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TU-217/317

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146

SERVICE BULLETIN

AM/FM STEREO TUNER

SANSUI TU-217/TU-317

SANSUI ELECTRIC CO., LTD.
14-1, Izumi 2-Chome, Suginami-ku, Tokyo 168 Japan
TELEPHONE (03) 323-1111/TELEX, 232-2076

Please bind this bulletin with the service manual, TU-217 or TU-317 issued previously. Since improvement was made on TU-217/317, a part of design and specification is modified; therefore, when ordering the parts of modified TU-217/317, please refer to this bulletin.

* The serial No after modification.

TU-217	Set after serial No 849010001
TU-317	Set after serial No 029010001

For the adjustment and dial thredening, refer to the service manual TU-217/317 issued perviously.

SPECIFICATIONS

• TU-217

FM Section

Tuning range	88 to 108 MHz
Usable Sensitivity	
Mono IHF	10.5 dBf (1.83 μV: T100)
DIN	2 μV
Stereo IHF	20.0 dBf
50 dB Quieting Sensitivity	
Mono	13.8 dBf
Stereo	37 dBf
Signal to noise ratio at 65 dBf	
Mono	78 dB
Stereo	72 dB
Distortion (at 65 dBf)	
Mono	less than 0.1 % at 1,000 Hz
Stereo	less than 0.13 % at 1,000 Hz
Alternate channel selectivity (at 400 kHz)	50 dB
Capture ratio	1.0 dB
Image response ratio	50 dB (at 98 MHz)
Spurious response ratio	80 dB (at 98 MHz)
Stereo separation	35 dB at 100 Hz 40 dB at 1,000 Hz 30 dB at 10,000 Hz
Frequency response	30 to 15,000 Hz +0.5 dB −1 dB
Antenna input impedance	300 ohms balanced 75 ohms unbalanced

AM Section

Tuning range	530 to 1,600 kHz
Usable sensitivity (Bar antenna)	47 dB/m (220 μV/m)
Selectivity (± 10 kHz)	35 dB
Signal to noise ratio	48 dB

Others

Output level	775 mV
Power requirements	100, 120, 220, 240 V 50/60 Hz
For U.S.A. and Canada	120 V (60 Hz)
Power consumption	5 W
Weight	4.7 kg (10.4 lbs) net 5.8 kg (12.8 lbs) packed

• TU-317

FM Section

Tuning range	88 to 108 MHz
Usable Sensitivity	
Mono IHF	10.3 dBf (1.8 μV: T100)
DIN	1 μV
Stereo IHF	19.0 dBf
50 dB Quieting Sensitivity	
Mono	13.5 dBf
Stereo	36.5 dBf
Signal to noise ratio at 65 dBf	
Mono	79 dB
Stereo	73 dB
Distortion (at 65 dBf)	
Mono	less than 0.07 % at 1,000 Hz
Stereo	less than 0.09 % at 1,000 Hz
Alternate channel selectivity (at 400 kHz)	50 dB
Capture ratio	1.0 dB
Image response ratio	55 dB (at 98 MHz)
Spurious response ratio	83 dB (at 98 MHz)
Stereo separation	35 dB at 100 Hz 40 dB at 1,000 Hz 30 dB at 10,000 Hz
Frequency response	30 to 15,000 Hz +0.5 dB −1 dB
Antenna input impedance	300 ohms balanced 75 ohms unbalanced

AM Section

Tuning range	530 to 1,600 kHz
Usable sensitivity (Bar antenna)	47 dB/m (220 μV/m)
Selectivity (± 10 kHz)	35 dB
Signal to noise ratio	48 dB

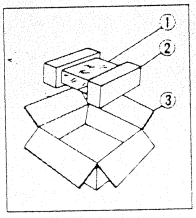
Others

Output level	775 mV
Power requirements	100, 120, 220, 240 V 50/60 Hz
For U.S.A. and Canada	120 V (60 Hz)
Power consumption	15 W
Weight	5.3 kg (11.7 lbs) net 6.4 kg (14.1 lbs) packed

* Design and specifications subject to changes without notice for improvements.

1. PACKING LIST

Parts No.	Stock No.	Description
1	9116760	Vinyl Cover
2	9028101	Styrofoam Packing
3	9001810	Carton Case (TU-217)
	9001830	Carton Case (TU-317)



2. ACCESSORY PARTS LIST

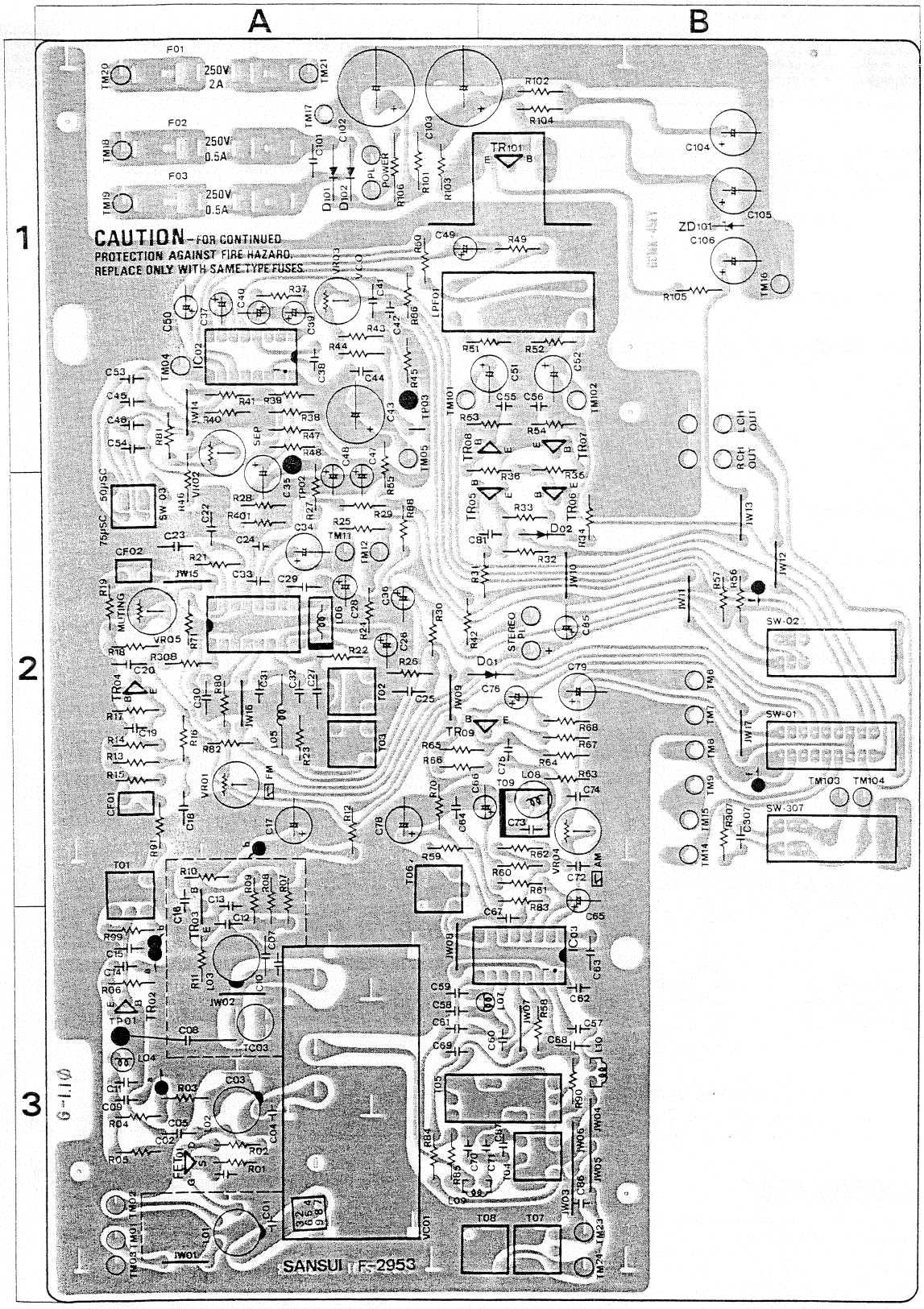
Stock No.	Description
9204890	Operating Instructions (TU-217)
9204870	Operating Instructions (TU-317)
9238170	Schematic Diagram (TU-217)
9238180	Schematic Diagram (TU-317)
5396700	Rack Mounting Adaptor
3810320, 1	Pinplug Cord
3820100	FM Antenna

3. PARTS LOCATION & PARTS LIST

Since some of capacitors and resistors are omitted from parts lists in this Service Manual, refer to the Common Parts List for capacitors & resistors which was appended previously to each Sansui Manual.

3-1. F-2953 FM, AM Circuit Board (Stock No. 7522241 TU-217/TU-317)

Conductor Side



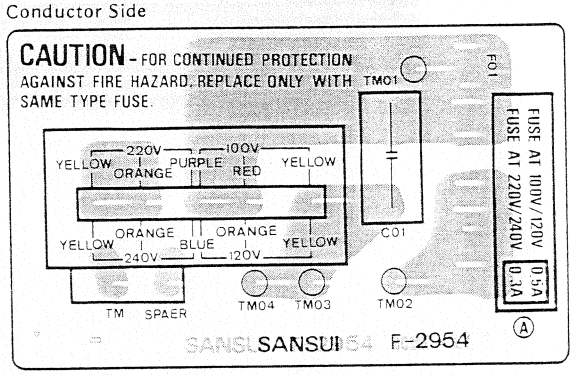
Parts List (F-2953)

Parts No.	Stock No.	Description	Position
•Transistor			
TR02, 03	0305801, 2	2SC1047 B, C	3A
TR04	0306341, 2	2SC1674 L, K	2A
TR05	0306070, 1	2SC1313 F, G	2A
TR06	0300470, 1	2SA726 (W) F, G	2B
TR07, 08	0305951, 2	2SC945 Q, P	1B, 1A
TR09	0306070, 1	2SC1313 F, G	2A
TR101	0361010	FS7815M	1B
•IC			
IC 01	0360750	μPC1167C	
IC 02	0360220 0360730	HA1196 HA1196-03	1A
IC 03	0360800	LA1240	3B
•FET			
FET01	0370172	2SK49H	3A
•Diode			
D 01	0340170	MV-103	2B
D 02	0311160	1S2473D	2B
D 101, 102	0310340	10D1	1A
C 01	0669347	12pF 50V C.C.	3A
C 03	0659015	2200pF 50V C.C.	3A
C 04	0669355	15pF 50V C.C.	3A
C 05	0669509	9pF 50V C.C.	3A
C 07	0669355	20pF 50V C.C.	3A
C 08	0679012	1.5pF 500V Gimmic C	3A
C 10	0669210	10pF 50V C.C.	3A
C 12, 13	0669210	10pF 50V C.C.	3A
C 37	0573228	0.22μF 35WV T.C.	1A
C 39	0573339	3.3μF 35WV T.C.	1A
C 40	0573159	1.5μF 35WV T.C.	1A
C 42	0629005	360pF 50V P.C.	1A
C 53, 54	0620561	560pF 50V P.C.	
C 70	0669415	15pF 50V C.C.	3A
C 71	0620361	360pF 50V P.C.	3B
R 106	0103122	1.2kΩ 1/2W C.R.	1A
L 01	4200720	Antenna Coil	3A
L 02	4210340	RF Coil	3A
L 03	4220400	O.S.C. Coil	3A
L 04	4900140	1μH Inductor	3A
L 05	4290011	Peaking Coil	2A
L 06	4290300	18μH Inductor	2A
L 07	4900110	100μH Inductor	3B
L 09	4900140	1μH Inductor	3A
L 10	4900100	3.3μH Inductor	3B
T 01	4235930	IF Coil	2A
T 02	4236050	Quadrature Coil	2A
T 03	4236060	Quadrature Coil	2A
T 04	4220590	150μH O.S.C. Coil	3B
T 05	0910370	Ceramic Filter	3B
T 06	4230620	IF Coil	2A
T 09	0910450	Filter Coil	2B
CF01, 02	0910480	Ceramic Filter	2A
LF01	0910220	Low Pass Filter	
VR01	1035170	Volume 47Ω B FM Meter Adj.	2A
VR02	1035210	Volume 220kΩ B Stereo Separation	2A
VR03	1034250	Volume 4.7kΩ B V.C.O. Free Run Adj.	1A
VR04	1035110	Volume 4.7kΩ B AM Meter Adj.	2B
S 01	1171170	Lever Switch Selector	2B
S 02	1171130	Lever Switch Mode	2B
S 307	1171130	Lever Switch, Noise Cancelar (TU-317 only)	2B
F 02, 03	0432210	AC Fuse 0.5A 250V	1A
VC01	1220210	AM, FM Variable Capacitor	
TC03	1230090	Trimmer Capacitor	

note: The circuit board F-2954 is not supplied as the assembled, the individual parts on the circuit board, however, are provided for orders.

3-2. F-2954 Voltage Selector Circuit Board

Conductor Side



Parts List

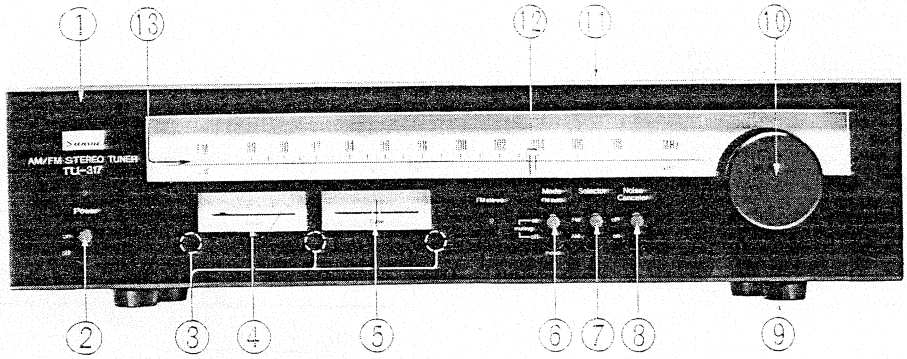
Parts No.	Stock No.	Description
C 01	0635476	0.0047μF 125WV M.C.
F 01	0432200 0432210	AC Fuse 0.3A 250V AC Fuse 0.5A 250V

Abbreviations

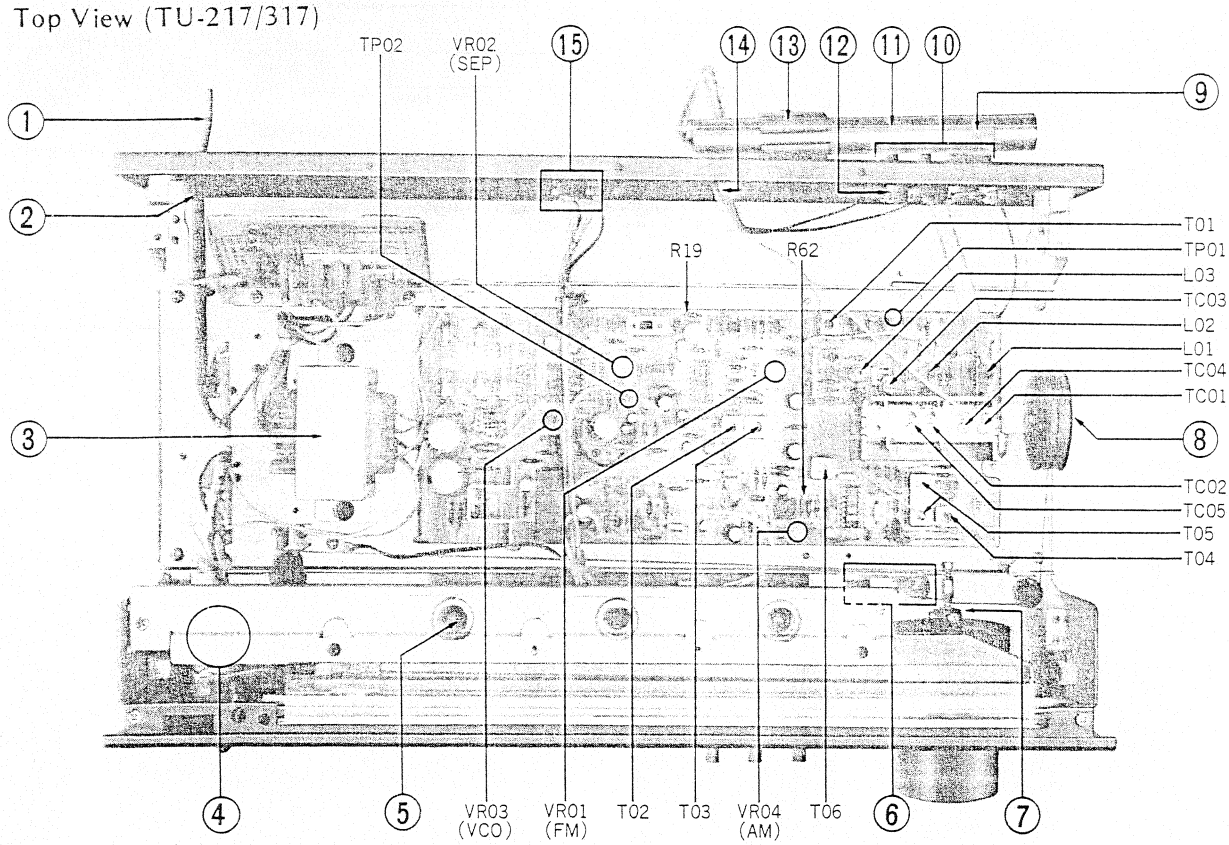
C.R.	: Carbon Resistor	E.C.	: Electrolytic Capacitor
S.R.	: Solid Resistor	BP.E.C.	: Bi-Polar Electrolytic Capacitor
Ce.R.	: Cement Resistor		
M.R.	: Metal Film Resistor	C.C.	: Ceramic Capacitor
		Mi.C.	: Mica Capacitor
F.R.	: Fusing Resistor	O.C.	: Oil Capacitor
N.I.R.	: Non-Inflammable Resistor	P.C.	: Polystyrene Capacitor
		T.C.	: Tantalum Capacitor
M.C.	: Mylar Capacitor		

4. OTHER PARTS

4-1. Front View (TU-217/TU-317)



4-2. Top View (TU-217/317)



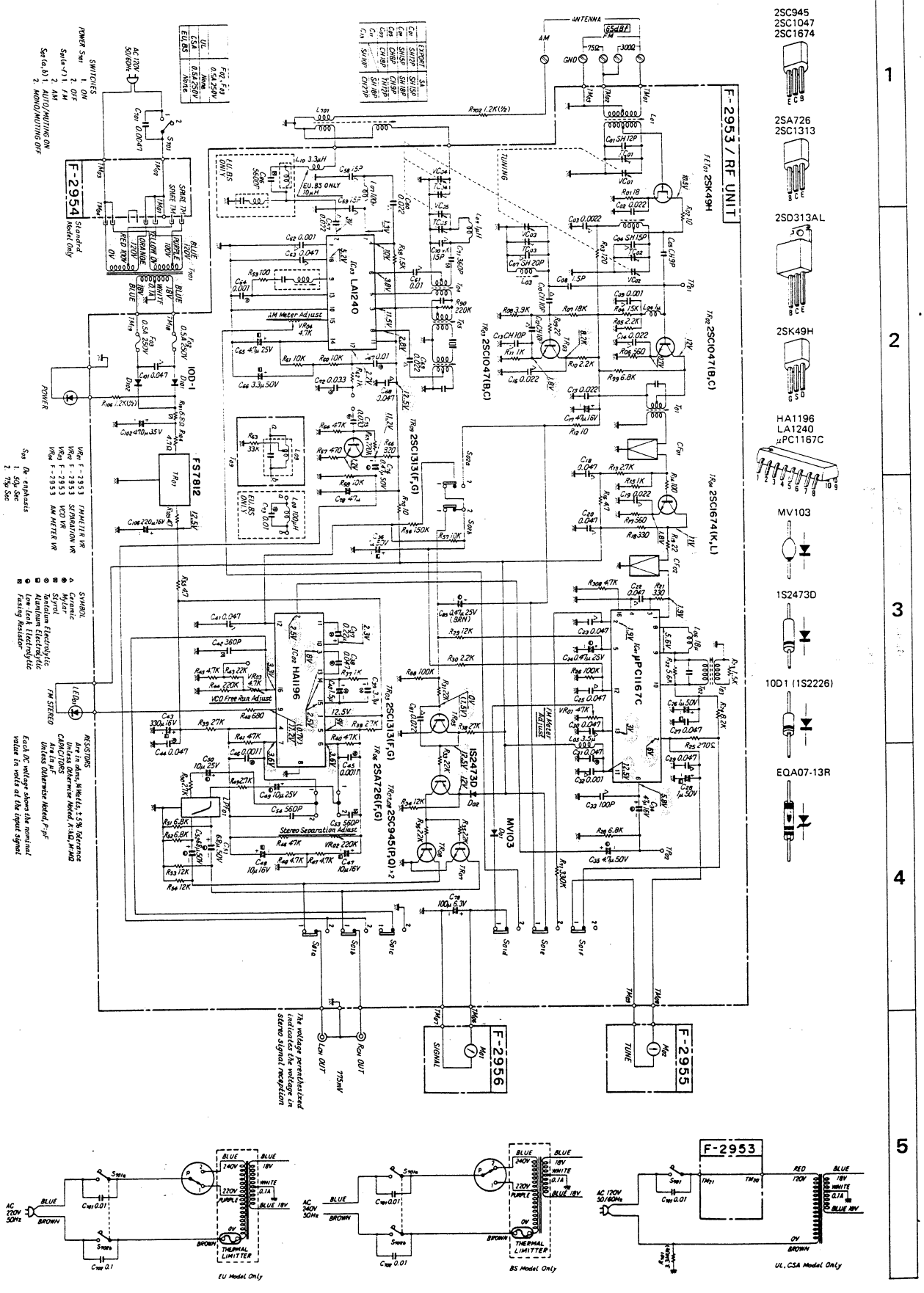
Parts List <Front View>

No.	Parts No.	Stock No.	Description
1		7008341	Front Panel Ass'y (TU-217 only)
		7008321	Front Panel Ass'y (TU-317 only)
		5296280	Dial Window Glass
		0319120	LED, power, st ind.
2	S 701	1172000	Lever Switch, power
		5326612	Knob, power
3		7726220	Lamp Ass'y (TU-317 only)
4	M 701	4301291	Signal Meter
5	M 702	4301301	Tune Meter
6	S 02	1171130	Lever Switch, mode
		5326612	Knob, mode
7	S 01	1171170	Lever Switch, selector
		5326612	Knob, selector
8	S 307	1171130	Lever Switch, noise cancelar (TU-317 only)
		5326612	Knob, noise cancelar
9		5507350	Leg
10		5318960	Tuning Knob
		7036660	Tuning Unit
11		5006980	Bonnet
12		5416475	Dial Pointer
13		5408491	Dial Scale

Parts List <Top View>

No.	Parts No.	Stock No.	Description
1		3800470, 1	Power Cord
2		3910510	Strain Relief
3	T 701	4002850	Power Transformer (TU-317 only)
		4002670	Power Transformer (TU-217 only)
4	C 701	0659811	0.01μF 125V C.C.
		5616370	Capacitor Cover
5	PL 01, 02	0400650	Lamp 8V 300 mA (TU-317 only)
6		7136141	Tension Unit (TU-317 only)
		7136111	Tension Unit (TU-217 only)
7		7036660	Tuning Unit
8		6146670	Pulley
9		5286480	Antenna Holder (B)
10		2210310	Antenna Terminal Board
11	L 701	4200860	Bar Antenna
12	R 701	0103122	1.2kΩ 1/2W C.R.
13		5286480	Antenna Holder (A)
14		3910800	Strain Relief
15		2200560	Output Terminal Board

5. SCHEMATIC DIAGRAM 5-1. TU-217



- Design and specifications subject to change without notice for improvement.
- La présentation et les spécifications sont susceptibles d'être modifiées sans préavis par suites d'améliorations éventuelles.
- Änderungen, die dem technischen Fortschritt dienen, bleiben vorbehalten.

A | B | C | D

5-2. TU-317